RESPONSE TO COMMENTS

Relating to

A REVISION TO KENTUCKY'S STATE IMPLEMENTATION PLAN (SIP) WHICH INCLUDES A NO_X BUDGET DEMONSTRATION AND INITIAL SOURCE ALLOCATIONS CONCERNING THE NO_X SIP CALL

KENTUCKY
NATURAL RESOURCES
AND ENVIRONMENTAL PROTECTION CABINET
Department for Environmental Protection
Division for Air Quality

Public Hearing Conducted
November 19, 2001 - 10:00 A.M. (EST)
Kentucky Division for Air Quality Conference Room
803 Schenkel Lane
Frankfort, Kentucky 40601

January 2002

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PREFACE

The Natural Resources and Environmental Protection Cabinet, Division for Air Quality, conducted a public hearing on November 19, 2001, to receive comments on a proposed SIP revision that included a NOx budget demonstration and initial source allocations concerning the NOx SIP Call. The hearing was held at the Division for Air Quality's conference room located at 803 Schenkel Lane, Frankfort, Kentucky.

This document presents a summary of all relevant comments submitted and the Cabinet's responses and is being submitted to the United States Environmental Protection Agency (U.S. EPA). It is also being provided to those individuals who submitted comments and to those public hearing attendees who indicated interest in receiving a copy of the document. Prominent advertisements of the hearing were published thirty days prior to the hearing in accordance with federal requirements (40 CFR 51.102).

Public hearing notices and announcement of availability of informational copies were distributed to over 1200 individuals. Informational copies were kept on file for public inspection at all eight of the Division for Air Quality's regional offices, the Air Pollution Control District of Jefferson County, and the Fayette County, Hardin County, and Henderson County Clerks'office for at least thirty days prior to the public hearing.

The services of a court stenographer were secured and the comments are kept on file at the Division's offices in Frankfort, Kentucky. A list of all persons that provided oral and written comments during the public comment period and their affiliation is included in this document.

PERSONS ATTENDING PUBLIC HEARING

November 19, 2001

Division for Air Quality Conference Room
803 Schenkel Lane
Frankfort, Kentucky

PERSON	AFFILIATION
Regina Henry	CEMEX – Kosmos Cement Company
Amarjit S. Gill	CEMEX – Kosmos Cement Company
Glenn P. Gibian	LGE Energy
Robert Hughes	East Kentucky Power Corporation
Richard D. Brewer	Cinergy/UIEK
Guy L. Cerimele	American Electric Power
Steve Noland	Western Kentucky Energy
Lloyd Cress	Greenebaum, Doll, and McDonald
Mike Thompson	Western Kentucky Energy

The following representatives from the Kentucky Natural Resources and Environmental Protection Cabinet were also present at the public hearing:

Martin Luther – Hearing Moderator
Millie Ellis
Diana Andrews
John Gowins

Others Present:

Melody Curtis – Court Reporter

PERSONS SUBMITTING TESTIMONY INTO THE PUBLIC HEARING RECORD ON THE NOx BUDGET DEMONSTRATION AND INITIAL SOURCE ALLOCATIONS CONCERNING THE NOX SIP CALL

November 19, 2001

PERSON	AFFILIATION	TESTIMONY
Winston A. Smith	U.S. EPA, Region 4	Written
Regina Henry	CEMEX – Kosmos Cement Company	Written
Amarjit S. Gill	CEMEX – Kosmos Cement Company	Oral and Written
J. Douglas Sparkman	Marathon Ashland Petroleum LLC	Written
Glenn P. Gibian	LGE Energy	Written
Richard D. Brewer	UIEK	Oral and Written
John Bunyak	National Park Service	Written
Dianna Tickner	Peabody Energy	Written

SUMMARY OF COMMENTS AND RESPONSES

(1) (a) COMMENT

Thank you for the opportunity to review the Commonwealth of Kentucky's proposed budget demonstration and initial source allocations which were submitted on October 10, 2001, to supplement your previously-submitted nitrogen oxides State Implementation Plan (NOx SIP) Call regulations. EPA has completed its review of this prehearing submittal, and has no comments. This submittal provides a clear demonstration that Kentucky will achieve the required NOx emission reductions in accordance with the timelines set forth in EPA's NOx SIP Call. The explanatory text and supporting documentation provided are well-organized and clearly presented. (*Winston A. Smith, U.S. EPA*)

(b) RESPONSE

The Cabinet acknowledges this comment.

(2) (a) COMMENT (Oral and Written)

In Section 2.2 the proposed regulations states "… the budget for large cement kilns, which are not part of the trading program, but are controlled at 30% of their uncontrolled levels is 1091 tons." We would like to clarify that this is the allowable limit for the Kosmos Cement Company's kiln each year during the period May 1 to September 30. If this is correct then we concur with the proposed SIP revisions (*Amarjit S. Gill and Regina Henry both with CEMEX – Kosmos Cement Company*)

(b) RESPONSE

The 1,091 tons is an estimate of Kosmos Cement's 2007 control period (i.e., May through September) NOx emissions with the EPA percent reduction (i.e., 30%) applied. Kosmos will be required under EPA's NOx SIP Call to comply with the requirements of a regulation that will be adopted by the Air Pollution Control District of Jefferson County that achieves at least the same amount of NOx reduction as the Division's 401 KAR 51:170. NOx requirements for cement kilns. As long as Kosmos complies with the applicable regulatory requirements then it will have complied with the NOx SIP Call.

(3) (a) COMMENT

The calculation of the NOx emission limits for combustion turbines in attachment 3 appears to be in error. LGE Energy believes that the formula that the KDAQ referenced (40 CFR 75, Appendix F, equation F-5) is the correct equation to use, but believe the KDAQ omitted the last term of the equation, which corrects for oxygen content. (*Glenn P. Gibian, LGE Energy and Richard D. Brewer, UIEK*)

(b) RESPONSE

The Cabinet concurs with this comment and has revised the EGU initial NOx allocations to reflect this correction.

(4) (a) COMMENT

Some combustion turbines have varied emission limits, depending on fuel type, for example, 65 ppm when burning oil and 42 ppm when burning natural gas. It would be appropriate to use the higher limit (as long as it doesn't exceed 0.15 lb/mmBtu) in determining NOx allowance allocations since these units are permitted to burn oil and emit at the higher emission limits.
(*Glenn P. Gibian, LGE Energy*)

(b) RESPONSE

The Cabinet does not concur. Typically, oil is utilized in special situations such as start-up or backup. Since natural gas is considered the primary fuel, it is appropriate to utilize the permit limit for natural gas.

(5) (a) COMMENT

The Plan reflects a bias from the model rule in favor of new sources by shortening the allocation period from 5 to 3 years. This allows new sources access to the credits allocated to existing units (that were earned by Kentucky's rate payers) sooner than deemed necessary by USEPA. This will accelerate the need to reduce emissions further by existing companies, thus potentially further increasing electric rates to our Kentucky customers. (*Richard D. Brewer, UIEK*)

(b) RESPONSE

The Cabinet acknowledges the comment. The U.S. EPA allowed states to make changes such as this one (i.e., changing the allocation period from 5 to 3 years) in response to each state's needs.
While the UIEK favors a longer allocation period it stated in its November 19, 2001,

NOx SIP Call comment letter, that “However, the UIEK acknowledges the Plan as a reasonable compromise between the interests of existing versus new sources.”

(6) (a) COMMENT

In regard to Kentucky’s NOx SIP Call Plan, Section 2.0 “Kentucky’s NOx Budgets”, the UIEK is seeking clarification regarding the “revision” to the Electric Generating Unit (EGU) budget. It is unclear (and not part of the regulation package completed for this Plan (401 KAR 51:001-195) as to why the EGU budget was reduced to account for units that are not required to further control their emissions. To exempt small units with relatively small emission from investing in expensive control equipment is reasonable, but to remove allowances permanently from the trading budget is not.

The EGU budget was based on the electricity demand of Kentucky customers and the operation of the existing sources at the time the budget was set. The fact that 11 of the existing sources were small should not trigger lowering of the trading budget. As those units reduce utilization and eventually retire, their allowances should revert back to the EGU trading budget, as their generation will likely be made up by larger EGUs.

It would appear more appropriate for the KDAQ to monitor this subcategory of sources and as its emissions decrease over time, to adjust the “revision” from the EGU trading budget appropriately. The EGU trading budget was based upon electricity demand and as the units meeting this demand change within the “subcategories” so should the trading budget. (*Richard D. Brewer, UIEK*)

(b) RESPONSE

The Cabinet does not concur. The small units in question (<25 MWe) are not subject to the NOx SIP Call cap and trade program. However, their emissions were included in the U.S. EPA’s allowance distribution for EGUs to each state. Their emissions had to be accounted for from the EGU pool. According to EPA, when small units retire, the allowances stay in the small unit budget. They are not, nor may they be, transferred to the large EGU or Non-EGU trading budgets.

(7) (a) COMMENT

It appears that the Plan assigns small EGU sources to a subcategory that is not required to make any further emission reductions and therefore, growth in this subcategory may exceed USEPA’s projected budget without penalty. This appears to be a perverse incentive to continue operation of these existing units and to build more of these types of units. (*Richard D. Brewer, UIEK*)

(b) RESPONSE

According to EPA, if the number of small units in the state is increased beyond the growth projections already built into the state's budget, there is no penalty or consequence for the state. The small EGU units do not need allowances "in their hands" to operate. Except for those budgets covering sources for which the state has committed to get emissions reductions in the SIP, the budgets serve as an accounting mechanism and are not enforceable (See 63 FR 57356, 57426-27 (1998)). The discrepancy, if any, will be addressed at a later date.

(8) (a) Comment (Oral)

Inconsistency in the compliance date in Section 3(1) of 401 KAR 51:160: The compliance date in Sections 3(1) says commencing with a later date of May 1, 2004. This should be May 31 as listed in earlier versions.
(*Richard D. Brewer, UIEK*)

(b) Response

The cabinet concurs. The cabinet requested at the July 10 Administrative Regulation Review Subcommittee meeting that the date in Section 3(1)(a) be amended from May 31 to May 1, and the date in Section 3(1) was amended inadvertently. The Regulations Compiler corrected this typographical error on the LRC web page, which now shows a date of May 31, 2004.

(9) (a) Comment (Oral)

Inconsistency in the compliance date in Section 3(1)(a) of 401 KAR 51:160: The compliance date in Sections 3(1)(a) says beginning May 31, 2003 and May 1 each year thereafter. This should say May 1, 2003 and May 1 each year thereafter.
(*Richard D. Brewer, UIEK*)

(b) Response

The cabinet concurs. The cabinet requested at the July 10 Administrative Regulation Review Subcommittee meeting that the date in Section 3(1)(a) be amended from May 31 to May 1, and the date in Section 3(1) was amended inadvertently. The Regulations Compiler corrected this typographical error on the LRC web page, which now shows a date of May 1, 2003.

(10) (a) Comment (Oral)

Inconsistency in the compliance date in Section 7(1) of 401 KAR 51:160: Compliance certification should read on or before January 30 each year beginning in 2005 rather than November 30, 2005.
(*Richard D. Brewer, UIEK*)

(b) Response

The cabinet concurs in part. Program approval requires that compliance certifications be submitted by November 30 of each year. However, the year was not changed from 2005 to 2004 when the cabinet requested at the July 10 Administrative Regulation Review Subcommittee meeting that the date in Section 7(1) be amended. The Regulations Compiler corrected this typographical error on the LRC web page, which now shows a date of November 30 of each year, beginning in 2004.

(11) (a) COMMENT

Catlettsburg Refining LLC operates a refinery in Catlettsburg, Kentucky. As you are aware, the proposed rule includes the refinery with a total of four NOx budget units regulated under 40 CFR part 97 and 401 KAR 51:160. While earlier comments submitted by the Catlettsburg [Refining] provided the October 27, 1998, *Federal Register* notice (63 FR 57416) that clarified the NOx SIP Call does not apply to the FCC CO Boilers, it appears that Kentucky is proposing to be more stringent than the Federal requirements. Under the proposal, each of these units is a fossil fuel-fired industrial boiler, as those terms are defined at 401 KAR 51:001. It is asked that Kentucky not be more stringent than the federal requirements.
(*J. Douglas Sparkman, Marathon Ashland Petroleum LLC*)

(b) RESPONSE

The Cabinet does not concur. After consultation with the U.S. EPA, EPA has indicated that the Marathon Ashland Oil CO boilers are subject to control under the NOx SIP Call. Although associated with FCCs/RCCs, that association does not exclude them as covered units. Rather, as typical CO boilers, they would be subject on the basis of equipment and fuel type. The fuel source (i.e., the FCC/RCC) would not matter. The quote from the 10/27/98 *Federal Register* notice (63 FR 57416) would exclude the FCCs themselves (and other equipment categories mentioned) from control, but would not exclude the boilers associated with those FCCs.

(12) (a) COMMENT

Three of the affected boilers are heat recovery units that, in addition to combusting fuel to generate useful heat, also serve as conduits for emission streams from non-affected

units. Specifically, Emission Point ID No. 61 is associated with the FCCU CO Boiler, through which the emissions from the Fluidized Catalytic Cracking Unit (FCCU) are exhausted. Emission Point ID No. 8C is associated with the two RCCU heat recovery units, through which the emissions from the Residual Catalytic Conversion Unit (RCCU) are exhausted. The NOx allocation for each of these units included in the Kentucky NOx SIP Call Plan is incorrect and needs to be adjusted. The average heat input used to calculate the NOx allocation for Emission Point ID No. 61 should be increased from 533,752 million Btu per year to 1,433,030 million Btu per year. The average heat input used to calculate the NOx allocation for Emission Point ID No. 8C should be increased from 631,117 million Btu per year to 1,592,342 million Btu per year. In summary, the heat input should exclude the sensible from the regenerator, it should include the fuel heat input (from primarily CO combustion) from the regenerator, and it should include the fuel heat input from the fuel gas combusted in the boiler. Thus, the NOx budget allocation would be larger than proposed.
(*J. Douglas Sparkman, Marathon Ashland Petroleum LLC*)

(b) RESPONSE

The Cabinet does not concur. First, the reference to emission point 61 in Marathon Ashland's November 16, 2001, comment letter is incorrect and should be emission point 64 which is the company's CO boiler associated with the FCC unit. The two other CO boilers which are associated with the RCC unit are correctly identified at emission point 8C.

According to the Cabinet's 401 KAR 51:001 the term heat input is defined. The definition indicates that heat input "Does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust from other sources." Therefore, this definition would exclude the fuel heat input (from primarily CO combustion) from the regenerator.

(13) (a) COMMENT

After reviewing the current method for NOx credit allocations in the State of Kentucky, Peabody Energy and its subsidiary, Thoroughbred Generating Company wish to express support for this method. We believe [in] this method which allocates 95 percent of Kentucky's NOx credits to coal, gas, and oil plants on a MWh basis every three years utilizing the most recent year's plant output. Initially the other 5% of the credits would be available for new units to receive as they come on line during the three-year period. At the end of the three-year period, all units including new regulated and unregulated units would be included in the next allocation pool for 95 percent of Kentucky's NOx credits, again on the most recent year's generation level. (*Dianna Tickner, Peabody Energy*)

(b) RESPONSE

The Cabinet acknowledges this comment. While Kentucky's plan did allocate 95% to existing and 5% to new EGU sources it did not utilize electrical capacity output (MWh) to provide allocations. Instead, Kentucky's plan, per 401 KAR 51:160, provided allocations based on the unit's average of the two highest heat inputs for the three most recent control periods**.** In addition, a new unit can remain a new unit for more than three years depending on when the unit begins operation.

(14) (a) COMMENT

Our review of the proposal indicates that the Kentucky Natural Resources and Environmental Protection Cabinet (Cabinet) has revised several of the NOx budgets to reflect corrections to the Environmental Protection Agency's (EPA) budgets for different affected categories of sources. Numerous references are also made regarding the Cabinet reserving the right to make budget changes for other source categories (e.g., stationary area sources, nonroad mobile sources, large internal combustion engines) that may differ from EPA's budgets for Kentucky. We believe it is important for Kentucky to ensure that its plan meets the intent of EPA's NOx SIP Call in order to have an approvable and viable plan at the state level. Consistency with any final EPA prescribed budgets for the Commonwealth would be an essential element for such a plan. As it is written, it is our understanding that the plan may be viewed as potentially inconsistent with required NOx budgets. In light of potential changes to final NOx budgets for some categories, some consideration may also be given to delaying individual unit allocations until final budgets are reconciled with EPA. (*John Bunyak, National Park Service*)

(b) RESPONSE

The Cabinet does not agree. In preparing this plan and other applicable revisions to Kentucky's State Implementation Plan (SIP), the Cabinet works in close coordination with the U.S. EPA which must approve such revisions. See EPA's favorable comment (1) (a) on page 4 regarding this proposal.

(15) (a) COMMENT

Under the proposed plan, 95% of available NOx allocations would be reserved for the higher polluting existing sources with only a 5% set-aside available for new cleaner emitting sources to share. Kentucky should consider additional measures to ensure that unchecked growth (e.g., mobile, area, and stationary sources) and transport of emissions from other states do not impede progress intended by the proposed control program. For example:

Create an environmental set-aside to benefit welfare related issues, such as regional haze and acidic deposition affecting the region. This set-aside could also be used as a cushion for growth of mobile source sectors and new economic expansion potential not included in the EGU and non-EGU set-asides. This set-aside could be on the order of those for NOx control program sources (e.g., 5%) and would be available to offset growth and transport of emissions from non-program sources.

Establish applicability of emission limits on a year-round basis. Although historically the ozone non-compliance problem has been somewhat limited to seasonal periods, other aspects of environmental health (i.e., welfare issues) are not confined to the same seasonality. The adverse effects of nutrient loading acidic deposition, and contributions to visibility impairment by nitrogen oxides could be reduced by NOx controls that are effective year-round. In addition, eventual implementation of EPA's new 8-hour average ambient ozone standard may dictate the need to expand the control period of the NOx program to the more stringent nature of the standard. (*John Bunyak, National Park Service*)

(b) RESPONSE

The Cabinet acknowledges this comment. Providing allowance set-asides to other categories the commenter suggests would require additional emission reductions from existing sources beyond the stringent requirements imposed by the administrative regulations that implement the NOx SIP Call.

Furthermore, a large part of the burden for achieving the NOx emissions reductions required under the NOx SIP Call rests with existing sources that must achieve significant reductions by May 30, 2004. As new sources are built and begin operation, they will eventually be rolled into the existing source pool which will require even further reductions from existing units as they receive even fewer allowances.

To establish a year round emission limit would be more stringent than the federal law mandates. In preparing this plan and other applicable revisions to Kentucky's State Implementation Plan (SIP), the Cabinet works in close coordination with the U.S. EPA which must approve such revisions. See EPA's favorable comment (1) (a) on page 4 regarding this proposal.